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Date: 03/10/2016
CONTENT
1. RESEARCH & URBAN DESIGN
2. WHERE & WHY TO DESIGN IT
3. HOW IS IT CONNECTED TO THE SITE
4. HOW THE BUILDING IS USED
5. HOW IS IT MADE
1. RESEARCH & URBAN DESIGN
Education reduces the skill gaps of potential workers in the industrial corridor.
Every 100 latino elementary school student
High School Graduates
college graduates

PILSEN

CHICAGO
In Americanormally high school students that enrolled community college rather than vocational institute are more probably persue university education because it is time-saving and cost-effective.
SCHOOLS MIGHT PROBABLY BE INTEGRATED INTO COMMUNAL FACILITIES LIKE LIBRARY, LEARNING CENTRE, COMMUNAL CENTRE BECAUSE OF THE DEVELOPMENT OF TECHNOLOGY & SELF-PACED GAP TRAINING.
URBAN DESIGN
LOWER WEST-SIDE - PILSEN
1. EXISTING PILSEN

CHALLENGES

- INDUSTRIAL HERITAGE
- GENTRIFICATION & ART DISTRICT
- LITTLE CONNECTION BETWEEN INDUSTRIAL AND RESIDENTIAL ZONES

Segregation between industrial and residential area.

Chicago

Pilsen

Permeable Surface
River Pollution
Waster Recycling

Less accessibility to train stations in Pilsen east.
Less accessibility to water and the Pilsen's southern neighborhoods.
Vacant spaces limite the potential of the development of Pilsen industry.

Renewable Energy

40%
4%
12%

Connection
Self-Sufficiency
2. NEW INDUSTRY CHALLENGES
ADVANCED DIGITAL MANUFACTURING
3. NEW ECOLOGY CHALLENGES

River Pollution
Permeable Surface
Waster Recycling

Chicago

40%
12%
4 %
4. NEW CONNECTIONS

CHALLENGES
4. New Connections

Challenges
DEVELOPMENT IN VERTICAL STRIPS
WE HAVE A SEQUENCE OF FUNCTIONS FROM MANUFACTURING TO REMEDIATION AND THEY WILL END AT THE WATERFRONT.
There are sub-divided functions under the preliminary category. We then will discuss the symbiotic relationship or best combination among the sub-functions.
SEQUENCE OF FUNCTIONS

Respond to Existing

Different green types

Parkway

Waterfront wetlands
2. WHERE & WHY TO DESIGN
URBAN LEVEL CONCEPT

URBAN DESIGN STRATEGIES
RESPOND TO EXISTING

• PRESERVE HERITAGE AND TRANSFORM THEM TO ANCHOR-POINTS
• RESPOND TO EXISTING DEVELOPMENTS IN ART-DISTRICT
• RESPOND TO EXISTING GRID

NEW INDUSTRY

• MIX-USE PROGRAM
• CREATIVE INDUSTRY
• INNOVATIVE AND CLEAN (MANUFACTURING) INDUSTRY
• SMALL AND MEDIUM SIZE ENTERPRISES

NEW ECOLOGY

• CLEANING THE WATERFRONT AND INDUSTRIAL CORRIDOR
• LOCAL SUSTAINABLE UTILITY SYSTEMS
• GREEN URBAN LANDSCAPE

NEW CONNECTIONS

• WATERFRONT AS CONNECTING ELEMENT TO LOOP AND OTHER NEIGHBORHOODS
• CLOSE CONNECTION BETWEEN NEW INDUSTRIAL AREA AND EXISTING PILSEN
• SUPPORT SUSTAINABLE WAYS OF TRANSPORT
Supposed location of the learning center

The proposed learning center is in the center of proposed creative industry district.
IT SHOULD BE IN EAST PILSEN

FOUR KEY LOCATION FACTORS THAT STRUCTURE
CREATIVE CLASS DIVIDES ACROSS VARIOUS CITIES AND METROS

Clustering in and Around the Urban Core

Proximity to Transit

NATURAL AMENITIES

WHERE ARE KNOWLEDGE INSTITUTIONS?
To downtown Loop

Pilsen

Bridgeport

Chinatown
In Pilsen, there are only primary to high schools but none of them provides skills for the creative industry jobs because those jobs require education higher than high school level.

The new learning center will introduce 2 educational modules, one is the facilities for art education for the whole community and accessible for everyone, the other one is a 2-year
ADMISSION: High School Diploma
HIGHEST CREDENTIAL AWARDED: Associate Degree
ANNUAL TUITION FEE: Approximately half those of 4-year institution
PARTNERSHIP: Communities, High Schools
LEARNING TIME: 2 years
CREDITS OPTIONS: examination, equivalent knowledge gained through life experience (e.g. apprenticeship, internship)

The Catawba Valley Furniture Academy (North Carolina, America) is an industry-driven training program designed by local furniture manufacturers to prepare students for skilled positions that are in high demand by one of the region’s largest employers.
CURRENT SITUATION: SURROUNDING COMPANIES
On-the-paid training as apprentices makes college education more affordable in latino communities.
RESEARCH ON LEARNING ENVIRONMENT IN THE FUTURE

The model for the future learning environment will be more student or user-focused rather than management-focused because of self-paced gap training is needed for killing skill gap & the developing technology makes the production of different people more readable.
THEMES OF FUTURE LEARNING ENVIRONMENT

BLURRING THE BOUNDARY OF FORMAL & INFORMAL SPACES.

VISUAL CONNECTION BETWEEN DIFFERENT SPACES.

THE ROUTES OF THE STAFF AND THE USERS ARE PARTLY OVERLAPPED FOR EFFICIENT SERVICE.

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STAFF

USERS OF LEARNING CENTER
CONCEPT: SPONGE
CONCEPT: SPONGE
PROGRAM OF THE LEARNING CENTER

FORMAL LEARNING

“EDUCATE TO INNOVATE”
CHICAGO CULTURAL PLAN

Community College of Creative Art

INFORMAL LEARNING

CHICAGO PUBLIC SCHOOL ART EDUCATION PLAN

Community Learning

Garden Green Space

Interior Collective Socialising
RECLASSIFYING & DEFINING THE GREEN AND YELLOW SPACE

TRADITIONAL MODEL
process-focused

NEW MODEL
student-focused
blurring informal & formal learning spaces.
INTENTIONAL LEARNING SPACES

open working space

maker lab

library

one of the studios
INCIDENTAL LEARNING SPACES

Exhibition space

Cafe

meeting rooms

out door spaces
3. HOW IS IT CONNECTED TO THE SITE
SURROUNDINGS
NEW BUILDINGS & PUSHING AND PULLING
Cars are limited to the spaces between building clusters so as to create pedestrian environment, which is one of our urban small-scale strategies for new industry.
FRONT/MAINING ENTRANCE OF LEARNING CENTER
MULTI ENTRANCE FOR STAFF’S CIRCULATION
SCHOOL AND COMMUNAL FACILITY
MAIN ENTRANCE
VIEW TO HIGH-RISE OF LOOP
TRANSPARENT CONNER TO THE GARDEN & WATER
4. HOW IS IT USED
GROUND FLOOR
BASEMENT

- kitchen
- insulating room for air handling unit
1F OPEN WORKING SPACE
1F PRIVATE LEARNING AND STUDIOS
1F CURCULATION AND OPEN WORKING AREA
PERSPECTIVE PRIVATE WORKING SPACE
2F LIGHT FROM VOIDS OF 3F
PERSPECTIVE EXHIBITION
3F READING ROOM AND STUDIOS
3F: LIGHT FROM VOIDS OF 4F
3F: FURNITURE AND STRUCTURE
4F EATING SPACE INSIDE AND OUTSIDE; STUDIOS
EATING SPACE WHICH IS ON THE TOP OF THE BUILDING ENCOURAGES VERTICAL MOVEMENT OF THE USERS
LIGHT FROM THE ROOF
THE EATING SPACE IS PARTLY COVERED WITH GREEN ROOF
VIEW TO THE CLASSROOM
RELATIONSHIP BETWEEN RADIUS AND PRIVACY OF SPACE

private space

R2000

R2000

public space

R4000

R4000
HOW IS IT MADE
LOADBEARING FRAME AND FACADE
RIBS INBETWEEN CURVED STEEL
IN-SITU CONCRETE FLOOR SLAB
COMPOSITE BOARD OR DOUBLE CURVED GLASS PANELS THAT PROTECTING THE STRUCTURE
TRANSPARENT CURTAIN WALL
WINTER HEATING

CHICAGO CANAL

cooling tower

INSULATING ROOM

AIR HANDLING UNIT
WITH HEAT EXCHANGER

HEAT PUMP

COLLECTIVE HEAT CONTROL SYS.
AQUIFER MANAGEMENT SYS.

SEASONAL / LONGTERM THERMAL STORAGE

8C°

25C°
SUMMER COOLING

CHICAGO CANAL

INSULATING ROOM

AIR HANDLING UNIT WITH HEAT EXCHANGER

HEAT PUMP

COLLECTIVE HEAT CONTROL SYS.
AQUIFER MANAGEMENT SYS.

25°C

8°C

SEASONAL / LONGTERM THERMAL STORAGE
CONCRETE FACADE WITH BRICK LAYER: OPENINGS BASED ON FUNCTION AND LIGHT REQUIREMENT

GLASS FACADE: ENTRANCE AND VENTILATION

1st Floor: open working space. studios
3rd Floor: library. studios
Detail aa 1:5

1 Safety laminate glass 2*6mm
2 Silicon seal
3 Thermal insulation
4 Steel rectangular section 50*400mm
5 Steel rectangular section 50*300mm
Detail bb 1:5

1 Precast concrete unit
2 200/100/30mm brick veneer
20mm panel to hold brick and connect to 140mm thermal insulation
500mm reinforced concrete wall
3 Wood frame with double glazing
Detail cc 1:5

1 20mm plywood panel for sill
2 Aluminium angle
Detail dd 1:5

1. Silicon covered double glazing
2. 500x500x50mm concrete slab on gravel bed
Detail ff 1:5

1. 70mm Subfloor profiled steel plate screed
Within 16mm heating pipe
15mm acoustic decoupling
800mm I beam
137mm reinforce concrete slab
Within 16mm cooling pipe
2. waterproof joint filler
3. Cold bent double curved glass panel
Detail gg 1:5
1 Silicon sealant
2 50mm composite board
250x80mm stainless steel channel
660mm I beam
120x40mm stainless steel channel
50mm stainless steel channel
THANKS!